

Serial No. 10/666,294
Amendment dated April 12, 2006
Reply to Office Action of January 12, 2006

IN THE SPECIFICATION:

Please amend the Specification of the above-identified application as follows.

Please amend the paragraph beginning on page 1, line 6 as follows.

--This application is related to ~~co-pending applications~~ United States Serial Patent Number 6,986,812 entitled— SLURRY FEED APPARATUS FOR FIBER-REINFORCED STRUCTURAL CEMENTITIOUS PANEL PRODUCTION (2033.66885)—and ~~co-pending application~~ United States Serial Number 10/665,541 entitled EMBEDMENT DEVICE FOR FIBER-ENHANCED SLURRY—(2033.66887), filed concurrently herewith and herein incorporated by reference.--

Please amend the paragraph beginning on page 2, line 22 as follows.

--One drawback of conventional processes for producing cementitious panels that utilize building up of multiple layers of slurry and discrete fibers to obtain desired panel thickness is that the discrete fibers introduced in the slurry in a mat or web form, are not properly and uniformly distributed in the slurry, and as such, the reinforcing properties that essentially result due to interaction between fibers and matrix vary through the thickness of the board, depending on the thickness of each board layer and a number

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of other variables. When insufficient penetration of the slurry through the fiber network occurs, poor bonding and interaction between the fibers and the matrix results, leading to low panel strength development. Also, in extreme cases when distinct layering of slurry and fibers occurs, improper bonding and inefficient distribution of fibers causes inefficient utilization of fibers, eventually leading to extremely poor panel strength development.--

Please amend the paragraph beginning on page 9, line 1 as follows.

--Next, a thickness monitoring or thickness control roll 60 is disposed slightly above and/or slightly downstream of a vertical centerline of the main metering roll 48 to regulate the thickness of the slurry 46 drawn from the feeder reservoir ~~57~~59 upon an outer surface 62 of the main metering roll 48. Another related feature of the thickness control roll 60 is that it allows handling of slurries with different and constantly changing viscosities. The main metering roll 48 is driven in the same direction of travel 'T' as the direction of movement of the carrier 14 and the carrier web 26, and the main metering roll 48, the backup roll ~~52~~50 and the thickness monitoring roll ~~58~~60 are all rotatably driven in the same direction, which minimizes the opportunities for premature setting of slurry on the respective moving outer surfaces. As the slurry 46 on the outer surface 62 moves toward the carrier web 26, a transverse stripping wire 64 located

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between the main metering roll 48 and the carrier web 26 ensures that the slurry 46 is completely deposited upon the carrier web and does not proceed back up toward the nip 52 and the feeder reservoir 59. The stripping wire 64 also helps keep the main metering roll 48 free of prematurely setting slurry and maintains a relatively uniform curtain of slurry.--

Please amend the paragraph beginning on page 10, line 10 as follows.

--During SCP panel production, the shafts 72 and the disks 74, 76 rotate together about the longitudinal axis of the shaft. As is well known in the art, either one or both of the shafts 72 may be powered, and if only one is powered, the other may be driven by belts, chains, gear drives or other known power transmission technologies to maintain a corresponding direction and speed to the driving roll. The respective disks 74, 76 of the adjacent, preferably parallel shafts 72 are intermeshed with each other for creating a "kneading" or "massaging" action in the slurry, which embeds the fibers 68 previously deposited thereon. In addition, the close, intermeshed and rotating relationship of the disks ~~72, 74, 76~~ prevents the buildup of slurry 46 on the disks, and in effect creates a "self-cleaning" action which significantly reduces production line downtime due to premature setting of clumps of slurry.--

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Please amend the paragraph beginning on page 13, line 6 as follows.

-- Referring now to FIGs. 4 and 5, an alternate embodiment to the production line 10 is generally designated 100. The line 100 shares many components with the line 10, and these shared components have been designated with identical reference numbers. The main difference between the line 100 and the line 10 is that in the line ~~10~~100, upon creation of the SCP panels 92, an underside 102 or bottom face of the panel will be smoother than the upper side or top face 96, even after being engaged by the forming device 94. In some cases, depending on the application of the panel 92, it may be preferable to have a smooth face and a relatively rough face. However, in other applications, it may be desirable to have a board in which both faces 96, 102 are smooth. Since the smooth texture is generated by the contact of the slurry with the smooth carrier 14 or the carrier web 26, to obtain a SCP panel with both faces or sides smooth, both upper and lower faces 96, 102 need to be formed against the carrier 14 or the release web 26.--